STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: ***POLELANDER*** *Agreement #:* **30-084552**

2. Name of applicant: **Washington State Department of Natural Resources**

3. Address and phone number of applicant and contact person:

   Pacific Cascade Region
   601 Bond Road
   PO Box 280
   Castle Rock, Washington 98611-0280
   Phone: (306) 274-2035
   Contact Person: Robert W. Johnson

4. Date checklist prepared: **05/14/2009**

5. Agency requesting checklist: **Washington State Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **December 17, 2009**
   b. *Planned contract end date (but may be extended):* **October 31, 2011**
   c. *Phasing:* **Not Applicable**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Yes

   Timber Sale

   a. *Site preparation:*

      Some mechanical site preparation will be done during ground-based harvest activities. Chemical spraying both aerially and by hand may be applied after harvest is complete.

   b. *Regeneration Method:*

      Upon completion of harvest activities and any necessary site preparation treatments, the units will be hand planted with a mix of Douglas-fir, noble fir, and western redcedar seedlings to meet or exceed Forest Practices requirements.

c. *Vegetation Management:*

Competing vegetation will be monitored periodically. If competing vegetation is adversely affecting tree survival and growth, a manual or chemical release may be prescribed.

d. *Thinning:*

A survey at approximately 12 to 15 years of age will determine if pre-commercial thinning is needed. The stands will be evaluated at approximately 25 to 40 years of age to determine if commercial thinning will be necessary.

Roads:

All roads constructed with this proposal will be abandoned upon completion of harvest activities. This work will be accomplished with DNR Heavy Equipment Crews and/or contractors.

Rock Pits and/or Sale:

The primary rock source for this sale will be the L-1217 Pit located in Section 2 of Township 3 North, Range 4 East, W.M. The pit will be maintained in a safe and drained condition and may be used for other current or future road projects in the vicinity.

Other:

It is possible that a direct sale of firewood from the sale area may occur following harvest completion.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☒*303 (d) – listed water body in WAU:* ☒*temp* ☐*sediment* ☒*completed TMDL (total maximum daily load):*

Horseshoe Falls WAU: Temperature for King Creek and the East Fork of the Lewis River.

Rock Creek WAU: Temperature and Fecal Coliform for Rock Creek.

☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Road plan available at the Pacific Cascade Region Office.**
☐*Wildlife report:*
☐*Geotechnical report:*
☒*Other specialist report(s):* **Old Growth Assessment**
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **Available upon request from the Pacific Cascade Region Office**
☒*Other:* **Spotted owl habitat mapping, Marbled murrelet reclassified habitat maps, Forest Practices Activity Maps, WAU map for rain-on-snow areas, Policy for Sustainable Forests (PSF 2006), State Soil Survey, DNR GIS databases, Habitat Conservation Plan (HCP 1997), HCP Checklist, HCP Riparian Forest Restoration Strategy (RFRS), Slope Stability Checklist, Planning and Tracking Special Concerns Report and associated maps, Road Maintenance and Abandonment Plan (RMAP#2900971), Weighted Old Growth Habitat Index (WOGHI). All available upon request at the Pacific Cascade Region Office.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

☒***HPA*** ☐***Burning permit*** ☐***Shoreline permit*** ☒***Incidental take permit*** ☒***FPA # 2920035*** ☐***Other:***

"Potential tailholds across type 'F' streams will be implemented in accordance to the 10-year blanket HPA signed by the Washington Department of Fish and Wildlife on September 29, 2005 (Control # 103081 – 1) if certain portions of steeper ground within the proposal are cable yarded. This HPA only allows for tailholds and not for yarding or cutting within these buffers."

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description:*

This five-unit timber sale proposal is located in the Larch Landscape and is approximately 14 miles east of Battle Ground, Washington. The units are primarily comprised of Douglas-fir, with small components of western hemlock, western redcedar, red alder, and bigleaf maple. The proposal area of this sale is approximately 117 acres and the harvest area is approximately 56 acres. There are approximately 32 harvestable acres on State Forest Board Transfer trust lands (01) and approximately 24 harvestable acres on Common School trust lands (03). Mobile yarding will be permitted during dry soil conditions on the portions of the harvest area with slopes of 40% and below. It is expected that the entire proposal area will be mobile yarded, but cable yarding of the smaller, steeper areas may be allowed. The primary rock source for this sale will be the L-1217 Pit located in Section 2 of Township 3 North, Range 4 East, W.M.

Unit	Proposal Acres	RMZ/WMZ Acres	Unstable Slope Acres	Existing Road Acres	Sale Acres	Leave Tree Clump Acres	Harvest Acres	Harvest Volume
name	*gross*			*within unit*	**8=leave trees*	*clumped acres*	*Net*	*Estimated MBF*
1	14	3		<1	11	<1	11	440
2	43	20		<1	23	2	21	840
3	33	17		0	16	2	14	518
4	13	11		0	2	<1	2	74
5	14	5		<1	9	1	8	264
Totals	117	56		<1	61	5	56	2,136

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*

Stand Description
The proposal area is dominated by 60 to 70-year-old Douglas-fir with scattered western hemlock, western redcedar, big leaf maple, and red alder. The understory includes but is not limited to sword fern, vine maple, Oregon grape and salal. Elevations range from 1,400' to 1,840'.

Type of Harvest
This proposed activity will be a variable retention harvest.

Overall Unit Objective:
Harvest objectives are to provide revenue for trust beneficiaries through sustainable forest management while meeting the obligations of Forest Practices rules and the Department's HCP. Specific objectives are to harvest the stand while protecting streams (water quality and fish habitat), provide retention trees, minimize soil impacts and minimize disturbance to potentially unstable slope features.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		1,940	2	0
Reconstruction		518		0
Abandonment		2,140	2	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	0			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map available at DNR region office, and/or color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. *Legal description:*

The harvest units are located in Sections 34 and 35 of Township 4 North, Range 4 East, W.M. The L-1217 Pit is located in Section 2 of Township 3 North, Range 4 East, W.M.

b. *Distance and direction from nearest town (include road names):*

This proposal is located approximately 14 miles east of Battle Ground, Washington.

From State Route 503 (between mileposts 13 & 14) turn East onto Rock Creek Road and follow for 0.3 miles
Road becomes NE 152nd Ave., continue 1.2 miles
Road becomes Lucia Falls Road, continue for 7.0 miles
Turn Right (east), onto Sunset Falls Road and follow for 2.1 miles
Turn Right (south) onto Dole Valley Road and follow for 2.3 miles
Turn left (east) onto the L-1100 and follow for 2.2 miles to get to Unit 1 and the L-1210/L-1100 junction
Turn right (south) onto the L-1210 and follow for 0.5 miles to get to Unit 2.
The West end of Unit 2 can be accessed by going south on the L-1210 road for 1.8 miles from the L-1100/L-1210 junction, turn right (northwest) onto the L-1215 and follow for 1.3 miles
Units 3-5 are 2.0 miles east of the L-1100/L-1210 junction off of the L-1100

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")*

WAU Name	WAU Acres	DNR WAU Acres	Sub-Basin Number	Sub-Basin Acres	DNR Sub-Basin Acres (estimated)	Proposal Acres in Sub-Basin (estimated)
Horseshoe Falls	28,416	7096	12	3,824	2,020	14
			14	1,286	1,113	60
Rock Creek	21,377	16,387	5	3,014	1,816	43

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

The following tables are an estimated summary of past and future activities on DNR-managed land and privately managed land in the Horseshoe Falls and Rock Creek WAUs (information is based on Forest Practices applications that have been

approved in the last seven years by the DNR's GIS database). Future timber harvest on private ownerships within the WAUs are unknown. The source of this information only provided the acreage on the WAU level. More than 75 percent of the land managed by the DNR in both WAUs are covered with vegetation greater than 25 years old.

Horseshoe Falls WAU

Approximately 25% of the land within the Horseshoe Falls WAU is managed by the DNR. The DNR manages approximately 52% of sub-basin 12 and approximately 87% of sub-basin 14. The remaining land within the Horseshoe Falls WAU is managed by Federal, other public, and private landowners. In the past seven years there have been 9 variable retention harvests totaling 1,082 acres within the Horseshoe WAU, on DNR managed land. Various timber stands managed by the DNR in the Horseshoe WAU are candidates for future variable retention and commercial thinning harvest activities. Additional road building and rock pit development may occur for access to forest management activities on DNR managed land and other ownerships. The plans of the adjacent landowners in the WAU are unknown.

Horseshoe Falls WAU	WAU ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED EVEN-AGED HARVEST IN THE FUTURE (through 2011)*	PROPOSED UNEVEN-AGED HARVEST IN THE FUTURE
DNR MANAGED LAND	7,096	1,082	135	967	UNKNOWN
OTHER OWNERSHIP	21,320	6,004	1,909	UNKNOWN	UNKNOWN
TOTAL	28,416	7,086	2,044	UNKNOWN	UNKNOWN

* includes FY 2010 Polelander Timber Sale

Note: Proposed future harvest acres are uncertain. They represent a likely possible DNR harvest strategy through 2011.

Rock Creek WAU

Approximately 77% of the land within the Rock Creek WAU is managed by the DNR. The DNR manages approximately 60% of sub-basin 5. The remaining land within the Rock Creek WAU is managed by Federal, other public, and private landowners. In the past seven years there have been 20 variable retention harvests totaling 2,326 acres within the Rock Creek WAU, on DNR managed land. Various timber stands managed by the DNR in the Rock Creek WAU are candidates for future variable retention and commercial thinning harvest activities. Additional road building and rock pit development may occur for access to forest management activities on DNR managed land and other ownerships. A 520 foot portion of a re-constructed road will go through the outer edge of a WMZ. Sedimination will be mitigated by draining all runoff water into the ditch line where it will be dissapated away from the WMZ. The plans of the adjacent landowners in the WAU are unknown.

Rock Creek WAU	WAU ACRES	ACRES OF EVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	ACRES OF UNEVEN-AGED HARVEST WITHIN THE LAST SEVEN YEARS	PROPOSED EVEN-AGED HARVEST IN THE FUTURE (through 2011)*	PROPOSED UNEVEN-AGED HARVEST IN THE FUTURE
DNR MANAGED LAND	16,387	2,386	526	3,030	UNKNOWN
OTHER OWNERSHIP	4,990	1,635	242	UNKNOWN	UNKNOWN
TOTAL	21,377	4,021	768	UNKNOWN	UNKNOWN

* includes FY 2010 Polelander Timber Sale

The DNR has an HCP agreement with the federal government concerning threatened and endangered species and their habitats, which requires the department to manage landscapes to provide and sustain long-term habitat quality. This agreement substantially helps the department to mitigate for harmful cumulative effects related to management activities. The HCP is designed to protect and improve fish and wildlife habitats over a broad regional area.

The applicable HCP strategies incorporated into this proposal are as follows:

***Retaining RMZs averaging 170 feet wide along five type 3 streams, and a minimum of 100 feet wide along type 4 streams. Retaining WMZs averaging 170 feet wide on one forested wetland greater than 1 acre in size and a minimum 100-foot wetland buffer on forested wetlands between 0.25 and 1.0 acres in size. All RMZ's were measured from the outer edge of 100 year floodplain, which is generally several feet futher from the center of the stream than the Ordinary High Water Mark (OHWM).**

*** Retaining RMZs and WMZs throughout the next rotation to protect water quality, stream bank integrity and stream temperatures. RMZs and WMZs will develop older forest characteristics that, in combination with other strategies, will help support older forest dependant wildlife populations.**

***Retaining a minimum of 8 trees per acre (greater than 12 inches Diameter at Breast Height and 30' tall) clumped and scattered throughout each unit. This strategy should provide legacy elements for recruitment of future snags, coarse woody debris, multi-layered stands, and large diameter trees. In combination, these features will provide elements of older forest habitat characteristics within the new plantations. Retained trees will continue to evapotranspire, and the interception function of the canopy will be maintained, thereby helping to avoid a potential increase in runoff and subsurface flow. The retained shrubs will continue to protect the underlying mineral soils from exposure, and thus increased infiltration and increased runoff will also be avoided. The retained trees and vegetation will also continue to provide wildlife habitat.**

*** After harvest, tree seedlings will be planted to compliment natural regeneration that is expected to occur. Though disturbed, native plants such as grasses, ferns, salal, salmonberry, and huckleberry will remain on site after logging and persist within the Douglas-fir timber type.**

*** Analyzing, designing, and constructing roads to minimize earth moving and reduce potential for stream sediment delivery.**

***To reduce the risk of potential erosion, road cut banks will be re-vegetated prior to the onset of wet weather to prevent sediment delivery and maintain soil stability.**

***A regular maintenance schedule will be followed to allow for proper road surface run-off and drainage. Haul routes for this proposal have been evaluated for potential environmental impacts. To assure sediment is controlled during hauling; cross-drains, sediment ponds, and other structures will be used to disconnect ditch water from flowing streams. Road ditch water will be routed to the forest floor at the earliest point possible, for filtering prior to entering flowing watercourses. New road construction will be located on stable locations. Road system analysis and design required under the HCP and analysis required under the Forest Practices RMAP process in the Larch Landscape was completed and approved (RMAP #R2900197-2), available at the Pacific Cascade Region Office). Road improvement projects identified in the RMAP began in 2003.**

***The Rock Creek and Horseshoe Falls WAUs contain 303d listed water courses as shown on the Department of Ecology's website (2008 survey data). There are sections of King Creek(Water Body ID#1223134458140) and the East Fork of the Lewis River (Water Body ID# 1227190458661) noted as 303d waters due to temperatures that are impaired and fail to attain applicable water quality standards. The Rock Creek(Water Body ID# 1223665458149) noted as 303d waters due to high concentrations of fecal coliform and temperatures that are impaired and fail to attain applicable water quality standards. The Rock Creek WAU area described in this proposal drains into Rock Creek downstream of where it is considered a category 5 waterway. Thus, this proposal will not further compromise and/or exacerbate these unacceptable levels of fecal coliform or temperatures within this segment of stream. The Horseshoe Falls WAU area described in this proposal drains into King Creek. King Creek is considered a category 5 waterway approximately 2-miles northwest of the proposal. Given the distance from the impaired segment of stream and our riparian protection measures outlined in our Habitat Conservation Plan the 303d waters associated with this WAU will not be impacted by this proposal.**

Note: Proposed future harvest acres are uncertain. They represent a likely possible DNR harvest strategy through 2011.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐**Flat,** ☐**Rolling,** ☒**Hilly,** ☐**Steep Slopes,** ☐**Mountainous,** ☐**Other:**

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The Horseshoe Falls WAU is situated in the western foothills of the Cascade Mountain Range and contains a variety of landforms, ranging from approximately 378 to 3,954 feet in elevation. Slopes vary from 0% to over 100%. The climate is moderate with an average precipitation of 76 inches annually. Approximately 17% of the WAU, or 4,837 acres, is within the rain-on-snow and snow dominated zones, and approximately 83%, or 23,579 acres is within the rain-dominated zone. Timber types include Douglas-fir, western hemlock, western redcedar, noble and pacific silver fir, red alder, and bigleaf maple. The major drainage for the WAU is the East Fork of the Lewis River, which flows into the Columbia River.

The Rock Creek WAU is situated in the western foothills of the Cascade Mountain Range and contains a variety of landforms, ranging from approximately 600 to 4,350 feet in elevation. Slopes vary from 0% to over 100%. The climate is moderate with 70 to 100 inches of precipitation annually. Approximately 33% of the WAU, or 7,054 acres, is within the rain-on-snow zone. Timber types include Douglas-fir, western hemlock, western redcedar, noble fir, pacific silver fir, red alder and bigleaf maple. The major drainage for the WAU is the East Fork of the Lewis River.

2) Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).

This proposal is situated on hilly terrain located between 1,400' and 1,840' feet above sea level. The proposal area is dominated by Douglas-fir with scattered western hemlock, western red cedar, as well as red alder and big leaf maple found within close proximity to water.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope found within the proposal area is approximately 55%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
3917	KINNEY-SKOLY-COMPLEX	15-30	29	INSIGNIFIC'T	MEDIUM
3918	KINNEY-SKOLY-COMPLEX	30-65	15	LOW	MEDIUM
3908	COBBLY SILT LOAM	5-30	6	INSIGNIFIC'T	MEDIUM
7403	COBBLY LOAM	30-45	4	LOW	MEDIUM
3607	GRAVELLY SILT LOAM	5-30	2	INSIGNIFIC'T	MEDIUM

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) Surface indications:

There were no observed surface indications or any known history of unstable slopes discovered within the vicinity of the proposed harvest area.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☒*No* ☐*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

See question B.1.h. below for protection measures that will be implemented with this proposal.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **2** *Approx. acreage new landings:* **1** *Fill source:* **Native**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

A small amount of incidental erosion could occur during the course of road building, rock pit development activities, and yarding. Prudent road location, appropriate construction techniques and maintenance, as well as the mitigating measures outlined in question B.1.h. below will minimize and control any possible erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):*

Approximately 2% of the proposal area will remain in permanent road surface.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)

Measures to reduce erosion on roads or during active road construction:

- **Roads will be out-sloped**
- **The re-constructed road through the outer edge of the WMZ will require additional rock if hauling takes place during wet conditions. Sedimentation will be mitigated by draining all runoff water into the ditch line where it will flow into an existing cross-drain away from the WMZ. No additional trees need to be felled to expand the width of the road through the WMZ. The road will be abandoned after the unit has been harvested, and re-planted with shade tolerant trees.**
- **Soils exposed during road construction will be grass seeded.**
- **Seasonal timing restrictions will prohibit road construction during wet weather conditions.**
- **There will be periodic maintenance and inspection of the road system to ensure proper drainage.**

Protection measures to reduce erosion associated with active logging operation:

- **Mobile yarding will be restricted to slopes less than 40% unless there are small, isolated steep pitches that pose no threat to compromising in-stream water quality or slope stability.**
- **The lead end of all logs will be suspended during all yarding operations.**
- **Tracked skidders will be allowed only during the months when dry soil conditions permit.**
- **Leave islands were placed around type 5 headwalls when possible.**

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Minor amounts of engine exhaust from logging equipment and dust from vehicle traffic and logging equipment are expected while the project is active.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map available at DNR region office, or forest practice application base maps.)*

Yes

a) Downstream water bodies:

Streams in Units 1, 3, 4, and 5 flow north into King Creek which flows into the East Fork of the Lewis River that flows into the Columbia River. Streams in Unit 2 flow west into Rock Creek which flows into the East Fork of the Lewis River that flows into the Columbia River.

b) *Complete the following riparian & wetland management zone table:*

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Stream	3	5	170
Stream	4	5	100
Stream	5	5	Buffered with leave trees in sensative locations
Forested Wetland	>1 acre	1	170
Forested Wetland	0.25 – 1 acre	3	100

c) *List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.*

All road locations were designed to minimize RMZ and WMZ disturbance.

The re-constructed road through the outer edge of the WMZ will require additional rock if hauling takes place during wet conditions. Sedimentation will be mitigated by draining all runoff water into the ditch line where it will flow into an existing cross-drain away from the WMZ. No additional trees need to be felled to expand the width of the road through the WMZ. The road will be abandoned after the unit has been harvested, and re-planted with shade tolerant trees.

All streams and wetlands have been evaluated per the HCP Water Typing System for Forested State Trust Lands and protected per current HCP guidelines and procedures. The proposed activity is not expected to influence the temperature or fecal coliform TMDL of the 303 (d) listed water bodies addressed in Section A-8.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map available at DNR region office.)*
Description (include culverts):

Timber felling, bucking, tracked mobile yarding, and/or road building will take place within 200 feet of all the described waters. The buffers described in question c) above will prohibit harvest activities within an average of approximately 170 feet of type 3 streams and within a minimum 100 feet of the type 4 streams. Leave tree clumps have been placed adjacent to streams and scattered individual leave trees have been placed along type 5 streams and headwalls to help minimize the harvest activities occurring along portions of streams. If necessary, type 5 streams may be crossed with logging equipment at designated crossings. These designated crossings will only be done during the dry season and will use downed logs to mitigate rutting and sedimentation. Forested wetlands have been protected by WMZ's ranging from 100-170'. Approximately 400 feet of road re-construction will occur in a WMZ located in Unit 2. The road goes into the WMZ a maximum of 40 feet from the outer edge. No trees will be cut for the re-construction. All water on the re-constructed road located within the WMZ in Unit 2 will be ditched to a relief culvert that will deliver the runoff away from the WMZ and associated forested wetland. After harvest shade tolerant conifers will be planted and the road will be abandoned. If hauling takes place outside of the designated period, additional rock will be required. Wind buffers were not deemed necessary due to the type of activity taking place and mid-valley location.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

There will be no fill and dredge material placed in or removed from any water surface or wetlands.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☒*No* ☐*Yes, description:*

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☐*No* ☒*Yes, describe location:*

The proposal lies within the 100-year floodplain of the type 5 streams in units 3 and 5.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

Generally, the high potential areas are located on slopes of 65% or greater and often involve unstable soils and/or steep headwalls. Some past natural failures have entered streams in small amounts. However, no slope failures associated with past timber harvest activities have been identified within the sub-basins, and none have been observed along the existing roads in these sub-basins. With the proposed mitigating measures implemented, this proposal is not expected to contribute material to surface waters. See questions B.1.c, B.1.d, B.1.f, B.1.h, and B.3.a.9.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐*No* ☒*Yes, describe changes and possible causes:*

See question B.3.a.13. below.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☐No ☒Yes, explain:

This proposal could potentially introduce minor amounts of sediment into the streams adjacent to the proposal area as a result of road building and logging operations during early stages of activity. The erosion control measures and operation procedures outlined in B.1.f. and B.1.h. are expected to minimize the chances of sediment delivery. Roads will be maintained as needed to control water runoff and avoid delivery of sediment to live water. Skid trails will be water-barred as necessary to prevent sediment delivery to live water.

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?
Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

Rock Creek WAU averages approximately 4 miles of road per square mile across all ownership. It is estimated that sub-basin 5 has approximately 4 miles of road per square mile.

Horseshoe Falls WAU averages approximately 2 miles of road per square mile across all ownership. It is estimated that sub-basins 12 and 14 average approximately 3 miles of road per square mile.

11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, STOP HERE and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.
☐*No* ☒*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

Rock Creek WAU:

WAU Percentage: 33%

Approximate percent of sub-basin 5: <1%

Horseshoe Falls WAU:

WAU Percentage: 16

Approximate percent of sub-basin 12: <1%

12) If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?

The proposal is within a ROS zone, but the DNR does not manage for it since less than 33% of the sub-basins are in a ROS zone per HCP procedure.

13) Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?
☐*No* ☒*Yes, describe observations:*

Normally, there are few significant changes associated with peak flows in the WAU or sub-basins. However, in the winter of 1996, a 100-year event occurred. The rainstorm set rainfall and flood level records in southwest Washington and northwest Oregon. The event caused many shallow mass-wasting events. Many stream channels were altered in this event due to extremely high stream flows with accompanying sediment loads and possibly large woody debris delivery. The full extent of this is not known.

14) Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.

This proposal may slightly change the timing/duration/amount of peak flow, and flow rates may increase slightly during low flow periods due to decreased transpiration and interception during the first decade of new forest growth. However, no cumulative impacts are expected since similar projects in the WAU have resulted in no noticeable increase in peak flows. See question B.3.a.16 below.

15) Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?
☒No ☐Yes, possible impacts:

16) Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.

- **The RMZ buffers described in question 3.a.1.c above will prohibit harvest activities within an average of approximately 170 feet of type 3 streams.**
- **Type 4 streams have been protected with a minimum 100-foot RMZ buffer.**
- **Type 5 streams have been protected with leave trees in protecting sensitive micro-sites along these seasonal waterways.**
- **Timber will be felled and yarded away from all streams.**
- **Cable yarding may be pursued in certain portions of this proposal that exceed 40%.**
- **Lead end suspension will be required.**
- **Mobile yarding will be restricted to slopes less than 40%, unless permission is granted by the Contract Administrator, and the areas in question are small, isolated steep pitches that pose no threat to compromising in-stream water quality or slope stability.**

- **If necessary, type 5 streams may be crossed with logging equipment at designated crossings. These designated crossings will only be done during the dry season and will use downed logs to mitigate rutting and sedimentation.**
- **Any slash that may enter a stream will be cleaned out per contract requirements. Further erosion control measures will be implemented if necessary.**
- **Sediment delivery will be addressed as needed during operations and may include the use of water bars and silt traps.**
- **There will be periodic maintenance and inspection of the road system to insure proper drainage.**
- **Yarding will be directed away from Riparian Management Zone (RMZ) boundaries.**
- **All water on the re-construction road located within the WMZ in Unit 2 will be ditched to a relief culvert that will deliver the runoff away from the WMZ and associated forested wetland. After harvest, shade tolerant conifers will be planted and the road will be abandoned. If hauling takes place outsided of required period, additional rock will be required.**
- **No equipment will be allowed within 30 feet of the edge of the 100-year flood plain of any type 3 or 4 streams.**

b. Ground Water:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Relief culvert drainage may increase ground water recharge directly below culvert outlets.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Minor amounts of oil, fuel, and other lubricants may inadvertently be discharged to the ground as a result of heavy equipment use or mechanical failure. No lubricants will be disposed of on-site. This proposed activity is expected to have no impact on ground water.

3) Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?
☒*No* ☐*Yes, describe:*

a) Note protection measures, if any.

- **Sediment control measures will be used as necessary during active haul to prevent sediment delivery to water.**
- **Timing restrictions or temporary road shutdown will be used as necessary during active haul to prevent sediment delivery to water.**

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water will be the only runoff associated with this proposal. On roads, storm runoff will be collected by road ditches and diverted through cross-drains over energy dissipaters and onto the forest floor. Within the harvest unit, runoff will follow natural topography and be largely absorbed into the ground.

2) Could waste materials enter ground or surface waters? If so, generally describe.

a) Note protection measures, if any.

Any logging slash that inadvertently enters any type 5 stream during the process of harvesting will be removed prior to the completion of harvest operations. Leave trees were left clumped and scattered along the type 5 streams within proposal area. See question B.1.h. for site specific protection measures to help control erosion and protect water quality.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, B-3-c-2-a, and B-1-h.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☒*salal,* ☒*other: Oregon grape, Vine maple*
☒grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☒other types of vegetation: *Sword fern, vanilla leaf, bracken fern, Oregon oxalis, and trillium.*
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

Approximately 2.1 MMBF of Douglas-fir, western hemlock and red alder will be harvested from the proposal area. The majority of the timber within the proposed area is approximately 60 to 70 years of age. Mechanical site preparation will be required prior to planting on portions of the harvest area to establish a viable future plantation. Some species of shrubs will be removed on the ground based portions of the proposal to ensure plantable spots for reforestation.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

Unit 1:

The northern boundary is bordered by private property that has a 55 to 70 year-old Douglas-fir stand. A portion of the western boundary is defined by a RMZ and a WMZ. The RMZ's and WMZ's are of similar age and timber type to the harvest area. The rest of the western boundary is bordered by 18 to 20 year-old Douglas-fir. The southern and southwestern portions of the unit are bounded by 55 to 60 year-old Douglas-fir. The eastern portion of the unit borders a 1 year-old Douglas-fir plantation. With the exception of the northern boundary, all ground adjacent to the unit is managed by the DNR.

Unit 2:

The southern and northern portions of the unit border both RMZ's and WMZ's that are of similar age and timber type to the harvest area. A portion of the southern boundary is adjacent to a 20 year-old Douglas-fir stand. The western portion of the unit also borders a 20 year-old Douglas-fir stand. The eastern boundary is adjacent to a 20 year-old mixed conifer stand. All ground adjacent to the unit is managed by the DNR.

Unit 3:

With the exception of the northwestern and southwestern portions of Unit 3 which is adjacent to a 1 year-old Douglas-fir plantation, the entire unit is bordered by RMZ's. The RMZ's are of similar age and timber type as the harvest area. All ground adjacent to the unit is managed by the DNR.

Unit 4:

With the exception of the southern protion of the unit which is adjacent to 60- 70 year-old Douglas-fir, the entire unit is bordered by RMZ's. The RMZ's are of similar age and timber type as the harvest area. All ground adjacent to the unit is managed by the DNR.

Unit 5:

The northern and eastern portions of the unit are adjacent to a 10 year-old Douglas-fir plantation. The southern and western portions of the unit are bordered by RMZ's. The RMZ's are of similar age and timber type as the harvest area. All ground adjacent to the unit is managed by the DNR.

2) **Retention tree plan:**

TSU / Area	Distribution Method for Leave Trees	Acres of Clumps	Total # Leave Trees
1	Clumped and Scattered	<1	88
2	Clumped and Scattered	2	184
3	Clumped and Scattered	2	128
4	Scattered	<1	16
5	Clumped and Scattered	1	72

All units have a minimum of eight wildlife and/or green recruitment legacy trees per acre remaining on site upon completion of harvest activities. All retained trees will provide wildlife habitat, older forest components, and a seed source to surrounding areas. Leave trees were selected to retain snags, species diversity, large diameter trees, wildlife trees, protect type 5 streams, and WMZs when possible. Where available, snags were protected by bounding out leave tree areas around them. The site will be replanted with conifer seedlings at a stocking level that meets or exceeds Forest Practices standards. This proposal was screened for potential old growth. One screening point indicated a moderate or high likelihood of old growth within or adjacent to the proposal. Old growth remnants were found in the RMZ's of Units 2, 3, 4, and 5. Since all of the old growth trees are in the RMZ's and are not a contiguous stand of five acres, there will be no impact on the harvest area. Please refer to the Old Growth Assessment for further details.

c. List threatened or endangered *plant* species known to be on or near the site.

None found in database search.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Leave trees were left clumped and scattered throughout all units. Leave tree clumps were also placed around the Tarbell Trail. Leave trees represent each stand and contain large structurally sound trees and wildlife recruitment trees. A mixture of conifer species will be planted to increase species diversity within the landscape and to mitigate for strong east winds present within the proposal site. Type 3 streams have an average buffer width of approximately 170 feet; type 4 streams have a minimum 100-foot wide RMZ buffer, and type 5 streams were protected where possible using clumped and scattered leave trees around the associated head waters. These RMZ's will protect riparian resources and maintain wildlife habitat. Wetland buffers are also designed to preserve the integrity of the forested wetland. Forested wetlands over 1-acre are protected using a 170' WMZ buffer and forested wetlands

between 0.25 and 1-acre are protected using a 100' WMZ buffer. There will be no harvest or road building acitivities within these WMZ's, with the exception of the re-construction in the WMZ in Unit 2.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☐hawk, ☐heron, ☐eagle, ☒songbirds, ☐*pigeon*, ☒other: **woodpeckers**
mammals: ☒deer, ☒bear, ☒elk, ☐beaver, ☒other: **raccoon, mountain beaver, coyotes, bobcats**
fish: ☐bass, ☒salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

None found in database search.

c. Is the site part of a migration route? If so, explain.
☒***Pacific flyway*** ☐***Other migration route:*** ***Explain if any boxes checked:***

This proposal is located in the Columbia River Flyway, which is part of the Pacific Flyway. Migratory waterfowl also use the Columbia River Flyway; however, the area in which this proposal is contained is not generally the type of area used for resting or feeding by migratory waterfowl. While migrating through Pacific Northwest Forests, many Neotropical migratory birds are closely associated with riparian areas, cliffs, snags, and structurally unique trees. Riparian areas and special habitats are protected through implementation of DNR's Habitat Conservation Plan.

This sale is located within the drainage basins of the federally threatened Evolutionary Significant Units (ESU) of the Lower Columbia River steelhead, Coho, Chinook, Chum, and is in the area (Columbia Basin) of potential bull trout habitat. As discussed in B-1-h, B-3-a-2, and B-3-a-16, the proposed protection of fish bearing streams should serve to protect the integrity of downstream conditions. The proposed activity should not create long-term negative impacts on the above mentioned species and their Essential Fish Habitats or Designated Critical Habitats within, Rock Creek, King Creek and the East Fork of the Lewis River.

d. Proposed measures to preserve or enhance wildlife, if any:

- **There will be a minimum of eight legacy trees per acre consisting of conifer and hardwood species for green tree and snag recruitment clumped within the units.**
- **Selected pockets of individual trees and leave tree clumps were left throughout the units in strategic locations that contain wet areas, type 5 streams, large-down-woody-debris, snags, and trees having desirable snag recruitment characteristics.**
- **Type 3 streams have been buffered by an average of 170 feet on each side and the type 4 stream has been buffered by a minimum of 100 feet on each side. Type 5 streams have been protected with clumped legacy trees where feasible.**
- **WMZ buffers will prohibit harvest and road building acitivites within at least 100-170' of wetlands, with the exception of the road re-construction in Unit 2.**
- **Approximately 56 acres are buffered in RMZs/WMZs, which will minimize sediment delivery.**
- **Riparian areas will be protected, preserving fish and amphibian habitat.**
- **Wildlife travel corridors will be maintained through the units along riparian areas, and the proposal area.**
- **Big game forage will improve as new regeneration and early plant species evolve post-harvest.**
- **Any snags felled for safety reasons shall remain near where they fall.**
- **No existing down woody debris greater than 36 inches in diameter shall be removed from the site.**
- **A mixture of conifer species will be planted to increase species diversity and mitigate for the strong east winds. This will attract a larger diversity of species utilizing a more diverse timber type in the future.**

This activity conforms to the PSF, HCP, and Forest Practices rules and regulations.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

None

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

There will be minimal health hazards due to operating heavy equipment and possible minor spillage of fuel and lubricating oils. The risk of forest fire is always present and will be increased for approximately two years following harvesting due to logging slash. Contractual clauses require operators to use established safety standards.

1) Describe special emergency services that might be required.

- **Firefighting by the Department of Natural Resources, this may be supported by local fire districts.**

- **Emergency medical and/or ambulance service for personal injuries.**
- **Response by the Department of Ecology if a hazardous waste spill were to occur.**

2) Proposed measures to reduce or control environmental health hazards, if any:

- **Compliance with state laws.**
- **Fire equipment will be required on site during fire season.**
- **Operations will cease if relative humidity falls below 30%.**
- **Public access may be restricted during times of high fire danger.**

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Noise from road building, logging equipment, chain saws, yarding whistles and log/dump trucks will increase during periods of operation on a short-term basis.

3) Proposed measures to reduce or control noise impacts, if any:

None

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

- **Timber Production.**
- **Mutual use road easements have been granted to other forestland owners for forest management activities in the vicinity.**
- **Rock from rock pits may be sold to other forestland owners for forest road maintenance.**

b. Has the site been used for agriculture? If so, describe.

No

c. Describe any structures on the site.

None

d. Will any structures be demolished? If so, what?

No

e. What is the current zoning classification of the site?

Forest Land

f. What is the current comprehensive plan designation of the site?

Resource Land

g. If applicable, what is the current shoreline master program designation of the site?

Not Applicable

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No

i. Approximately how many people would reside or work in the completed project?

None

j. Approximately how many people would the completed project displace?

None

k. Proposed measures to avoid or reduce displacement impacts, if any:

None

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

These harvest units will be reforested with commercial species and retained as forestland. This proposal is consistent with current land use designations and zoning regulations. See question A.11.b. above.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None

c. Proposed measures to reduce or control housing impacts, if any:

None

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Not Applicable

b. What views in the immediate vicinity would be altered or obstructed?

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐*No* ☒*Yes, viewing location:*

Tarbell Trail in Unit 2.

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒*No* ☐*Yes, scenic corridor name:*

3) How will this proposal affect any views described in 1) or 2) above?

The completed proposal as seen from some scattered forest roads and the Tarbell Trail will result in a removal of trees in the background. This proposal is similar to other forest management activities in the vicinity.

c. Proposed measures to reduce or control aesthetic impacts, if any:

The harvest area will be replanted with seedlings following the completion of harvest and site preparation activities. Leave tree design, RMZ's, and WMZ's will also reduce aesthetic impacts as seen from the surrounding area, and the Tarbell Trail. This activity conforms to other forest management activity in the vicinity.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

None

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

The Tarbell Trail goes through a portion of Unit 2. Some informal recreational opportunities include: Hunting, mountain biking, hiking, target shooting, ATV riding, berry, mushroom, and bear grass picking.

b. Would the proposed project displace any existing recreational uses? If so, describe:

There will be times during operations where sections of the Tarbell Trail will be temporarily interrupted.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The affected portions of the Tarbell Trail will be posted with signs to inform trail users of the activity. Contractual clauses will require that affected portions of the trail will have to be maintained while logging and road building activities take place. The Region Recreation Forester was notified of the future activity, and will be kept informed on start dates for this proposal when in proximity to the Tarbell Trail.

<u>Special Conditions Applying to the Tarbell Trail:</u>
•No activities shall occur over the trail on weekends or state recognized holidays in Unit 2.
•Lookouts will be required on all designated trails when timber falling takes place within 200 feet of the trail.
•Warning signs will be required where yarding activity takes place within 200 feet of the trail.
•The trail shall remain in a usable condition for weekend use.
•Where damaged, the trail will be repaired to pre-harvest conditions within 10 days of completion of harvest activities.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

This proposal was screened for potential archaeological sites or artifacts using the P&T Special Concerns Report and by using the State Uplands Viewing Tool to review historic and Government Land Office (GLO) Maps. During the pre-sales phase evidence of historic activity was observed by a qualified and trained Cultural Resource Technician.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

No prehistoric archaeological site(s) on the landscape were documented that led our cultural resource technician to identify and survey high probability areas within and adjacent to the proposal (indirect discovery). A Site Protection Plan will be completed with the cooperation of the affected Tribes, DNR, and DAHP.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

Documented cultural resources will be protected due to established riparian management zones and contractual measures designed to prohibit harvesting activities that may disturb undetected, culturally sensitive areas. In the event that any unknown archaeological resources are encountered, ground disturbing activities would be halted and a DNR Archaeologist will be contacted to survey the site and develop a Site Protection Plan.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

See question A.12.b. above and the timber sale vicinity map.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

Traffic from this operation will marginally increase noise, dust and vehicle density, which will require a heightened awareness for safety measures. Contractual clauses require the operator to use existing safety standards. Truck traffic from this individual operation should not increase the need for public road maintenance.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No

c. How many parking spaces would the completed project have? How many would the project eliminate?

None

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

Some new forest roads will be constructed. See question A.11.c. for details.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

This proposal will have very little impact since all of the new road construction will be forest management roads that end on state land. All forest management roads to be utilized will be tributary to paved county roads, which already have residential truck traffic.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

The completed project will generate less than one vehicular trip per day on average. Up to twenty-five vehicular trips per day could occur during peak harvest activities. These trips would occur primarily on weekdays between the hours of 6 a.m. and 6 p.m.

g. Proposed measures to reduce or control transportation impacts, if any:

See question B.14.a.1) above.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No

b. Proposed measures to reduce or control direct impacts on public services, if any.

None

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

None

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Product Sales Forester 8/20/09

Completed by: Jesse Steele Natural Resource Specialist 1 Date: 08/13/09
Title

Reviewed by: Robert W. Johnson PRODUCT SALES MANAGER Date: 8/31/09
Title